

# **EVOLVE**

# INSTALLATION AND OPERATING INSTRUCTIONS

#### IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

#### **READ AND FOLLOW ALL SAFETY INSTRUCTIONS**

- 1. Install in accordance with all national and local electrical codes.
- Disconnect power at circuit breaker or fuse before installing or servicing the fixture.
- 3. DO NOT mount in hazardous locations, near gas or near electric heaters.
- 4. DO NOT let power cords contact hot surfaces.
- 5. Equipment should be mounted in locations and at heights where it will not be readily subject to tampering by unauthorized personnel.
- DO NOT use accessory equipment not recommended by the manufacturer. The use of such equipment may cause unsafe conditions and will void the unit's warranty.
- 7. DO NOT use this equipment for other than its intended purpose.
- 8. All servicing should be performed by qualified personnel only.
- 9. Allow battery to charge for 24 hours before first use.
- 10. For indoor use only, unless WL (Wet Location) option is selected.

## SAVE THESE INSTRUCTIONS

2575 Metropolitan Drive • Trevose, PA • 19053 U.S.A Telephone: (215) 244–4204 • Fax: (215) 244–4208

## **WET LOCATION NOTES**

Ensure thorough weatherproofing by applying silicon sealant to all knockout openings in the weatherproof outdoor box, remember to apply silicon sealant to all threaded connections, including plugs and conduit fittings, for optimal protection against outdoor elements.

# **BASIC FUNCTIONALITY & FEATURES**

Test Button Located on Face Plate in the Center

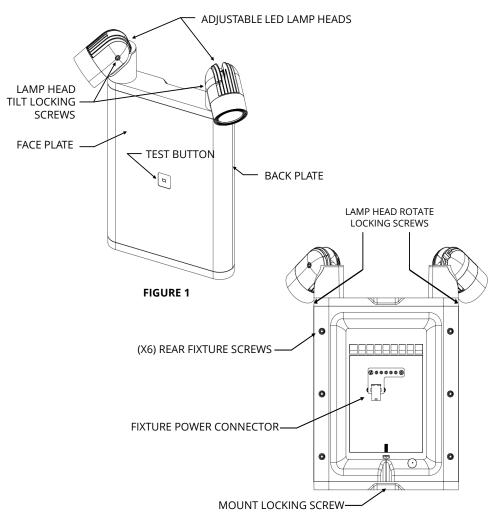
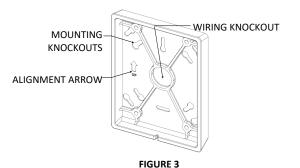
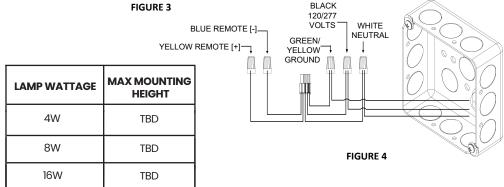


FIGURE 2

## **INSTALLATION INSTRUCTION - BACK MOUNT**





#### Step 1: Prepare the Mounting Box

Remove Knockouts: Identify and remove the appropriate knockouts on the mounting box.

#### Step 2: Connect the Wire Assembly

Wire Connections: Connect the wire adapter to the power supply wires using the provided wire nuts and cap any unused wires. **Follow local electrical codes**. Refer to the wiring details for your specific fixture:

#### All Units:

Black Wire: 120-277 VAC Universal Input

White Wire: Neutral

Green/Yellow Wire: Ground

Yellow Wire: Remote Lamp Positive (+) (9.6VDC)

Blue Wire: Remote Lamp Negative (-)

#### Step 3: Guide the Wires

Pigtail Wires: Guide the wire adapter through the knockout on the mounting plate.

## Step 4: Attach the Mounting Plate

Mounting Surface: Attach the mounting plate to the mounting surface or junction box using the pre-established holes.

#### NOTE: Ensure the notch on the back plate is oriented downward (the up arrow should point up) Step 5: Level and Tighten the Mounting Box

Level Check: Ensure the mounting box is level and fully tighten the screws.

#### Step 6: Connect the Wire Adapter to the Fixture:

Connection: Make the electrical connection from the back plate to the unit.

#### Step 7: Hang the Fixture

Mount the Unit: Hang the unit onto the back plate.

#### Step 8: Secure the Fixture

Locking Screw: Use a #11 Allen wrench to tighten the locking screw located at the bottom of the unit to secure it in place.

#### Step 9: Adjust the Lamp Heads

Lamp Adjustment: Adjust the lamp heads and secure the lamp heads in place by taking a #11 Allen Wrench and tighten to achieve the desired emergency illumination. (See "Lamp Adjustment" Section)

## **POLE MOUNT**

#### Step 1: Drill Holes

Use a 7/32" drill bit to create 4 holes in the mounting box at the indicated locations.

## Step 2: Attach Brackets

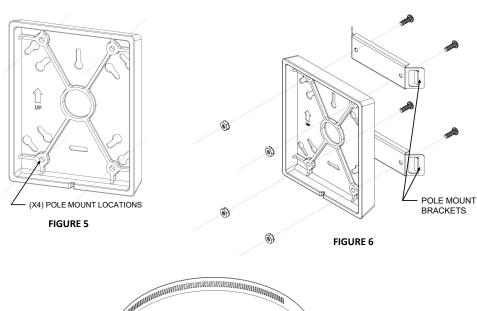
Secure pole mount brackets with supplied hardware as shown in Figure #6 below.

#### Step 3: Thread Clamp

Open the worm gear clamp, then thread it through the slots in the pole mount brackets.

#### Step 4: Mount to Pole

Place the mounting box with the attached brackets and worm gear clamp around the pole. Tighten the worm gear clamp to secure the assembly firmly to the pole.



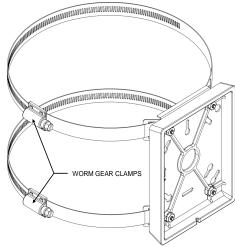


FIGURE 7

## **INSTALLATION INSTRUCTIONS - REMOTE LAMP HEADS:**

#### **FLUSH MOUNT**

## Step 1: Remove the Knockouts

Remove the appropriate knockouts on the mounting plate for the selected back mount.

## **Step 2: Connect Wires**

Connect the wires to the master unit wires using 18 AWG wire (Supplied by Others), following local electrical codes. The wiring is as follows:

#### **All Units:**

Yellow Wire: Remote Lamp Positive (+) (9.6VDC)

Blue Wire: Remote Lamp Negative (-)

## **Step 3: Guide the Wires**

Feed the wires through the knockout on the mounting plate.

## Step 4: Attach the Mounting Plate

Secure the mounting box to the mounting surface or junction box using the pre-drilled holes. Ensure the notch on the back plate is oriented down and the arrow is pointing up.

# Step 5: Level and Tighten

Check that the mounting box is level, then fully tighten the screws.

# Step 6: Connect to Remote Unit

Make wire connections from the back plate to the remote unit.

## Step 7: Hang the Unit

Hang the unit on the back plate.

# Step 8: Secure the Unit

Tighten the locking screw at the bottom of the remote unit.

# Step 9: Adjust Lamp Heads

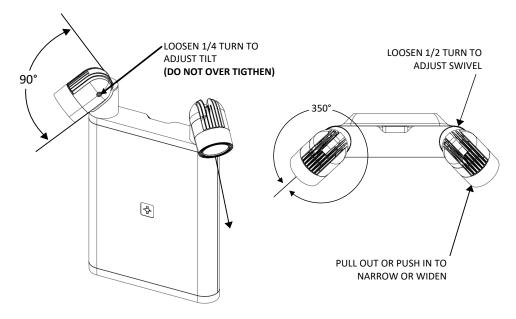
Adjust the lamp heads to achieve the desired emergency illumination. (See "Lamphead Adjustment" section)

# FOR REMOTE HEAD POLE MOUNT INSTRUCTIONS PLEASE REFER TO PAGE #4

## **LAMP ADJUSTMENT**

This Emergency Light features adjustable LED lamp heads with either one, two, or four lamp heads (model dependent). Each lamp head can fully swivel 350° degrees and can be tilted up to 90° degrees.

You can adjust each lamp head to narrow or widen the beam spread, allowing you to achieve the desired lighting coverage.



# SELF-TESTING / SELF-DIAGNOSTICS

This unit meets the requirements of NFPA 101 for Periodic Testing of Emergency Lighting Equipment. It provides visual indication of unit malfunctions including:

Battery Fault
Charger Fault
Transfer System Fault
Lamp Fault

## **SELF-TEST**

An automatic self-test and diagnostic function will be performed every 28 days. A load test will be performed for 30 seconds checking for a lamp, battery or transfer system fault.

This automatic self-test and diagnostic function will be performed only if the battery is fully charged. If not, the test will automatically reschedule. The charger function is monitored continuously.

## **DEFEAT MONTHLY DIAGNOSTICS TESTING**

The option to defeat the standard monthly testing is available as a factory option. This will allow the user to bypass the testing schedule that is provided standard with all units. If "DD" option is selected then this equipment is not self testing in conformance with the Life Safety Code, ANSI/NFPA 101.

#### **USER-TEST**

A manual USER-TEST can be performed for 30 seconds or 90 minutes. By pushing the "TEST" Button for 1 second, the lamps will illuminate for 30 seconds. If the "STATUS" indicator shows GREEN indicating a fully charged Battery and the Switch is pushed for 4 seconds, the lamps will illuminate for 90 minutes. If the Battery is not fully charged, the 30 second test will run. In either mode, the USER-TEST can be canceled by pushing and holding the "TEST" Switch for 1 second after the lampsturn on.

# **CLEARING FAILURE INDICATIONS**

Failure indications can be cleared by correcting the indicated fault and pushing and holding the "TEST" Switch for 1 second.

# **STATUS INDICATIONS**

Status indications for the self-testing / self-diagnostic system are shown on the following page.

## STATUS INDICATIONS

STATUS DISPLAY	FUNCTION	ACTION
Fast Blinking (4 Blinks)	IR Signal	Stops after Blinks Completed
Slow Flashing Green	In 90 Minute Test Mode	Wait for Test Sequence Completion*
Flashing Green	In 30 Second Test Mode	Wait for Test Sequence Completion*
Alternate Red and Green	Insufficient Charge For User Test	Factory Service Required/ Replace Battery
Red One Blink (ON/Pause)	Transfer System Failure	Verify Battery Connections
Red Two Blinks (On/Pause)	Battery Failure	Factory Service
Red Three Blinks (On/Pause)	Charger Failure	Replace Lamps
Red Five Blinks (On/Pause)	Lamp Failure	Factory Service
Flashing Orange	Heater Energized	No Action Required
Solid Red	Fast Charging	No Action Required
Solid Green	Full Charge	No Action Required

\*For 90-minute User Tests, wait for full charge.
For 30 second User Test, try again after an hour of charging.

## **TROUBLESHOOTING**

#### **PROBLEM**

Lamp failure indicated when there's no lamp failure.

## **SOLUTION**

The product may have calculated a larger lamp load when the lamp load calculation was performed at the first self-diagnostic function test. To reset the lamp failure status, remove the fixture from the wall, disconnect the battery, wait 30 seconds, reconnect the battery, reinstall the fixture onto the mounting plate.

The lamp current calculation will be performed on the next self-test/self-diangostictest.

#### INFRARED REMOTE TESTING

To activate TRANSMITTER, remove tab from the back of the device.

The USER-TEST can be performed up to 20 feet away using the optional "INFRARED REMOTE TESTING TRANSMITTER". By aiming the transmitter at the legend face and pushing either the "30 SECOND" or "90 MINUTE" button for 1 second. The behavior of the exit sign is the same as when the user tests are initiated from the local test button.

#### Using the Remote:

- Press and hold the 90 seconds test button for up to 10 seconds until the LEDs turn off on their own Using the Test Button:
  - Press and hold the switch for up to 10 seconds until the LEDs turn off on their own. During both
    procedures: The red/green INDICATOR light will FLASH erratically for 10 seconds and then change
    to solid red once the main LEDs turn off. This indicates that the battery reset has been triggered.

**NOTE**: The fixture will not respond to any remote or switch operations until the battery conditioning is complete, which may take a few hours. However, it will respond to power loss, but full run-time is **NOT** guaranteed until both conditioning and 24-hour charge cycles are completed.

## **BATTERY REPLACEMENT**

To replace battery, disconnect branch circuit and detach unit from junction box. Unplug battery connector from printed circuit assembly.

For the **16W EVO**, the unit will be supplied with a 9.6V 3300 mAh Lithium Iron Phosphate (LiFePO4 battery), replace with part number **B410004** only.

For the **CT 16W EVO**, the unit will be supplied with a 9.6V 3300 mAh Lithium Iron Phosphate (LiFePO4 battery) with a heater which will need to be unplugged and replaced with part number **A310023** only.

For the **32W & 64W EVO**, the unit will be supplied with a 9.6V 6700 mAh Lithium Iron Phosphate (LiFePO4) battery(s), replace with part number **B410002** only.

For the **CT 32W & CT 64W EVO**, the unit will be supplied with a 9.6V 6700 mAh Lithium Iron Phosphate (LiFePO4 battery) with a heater which will need to be unplugged and replaced with part number **A310024** only. For a **CT 64W EVO**, there will be two replacements.

Do not interchange battery types.

Used batteries may not be disposed of in the municipal solid waste stream. For information on local recycling drop-off points, phone toll free 1-800-BATTERY (1-800-228-8379).

## **BATTERY REPLACEMENT PROCEDURE**

#### Step 1: Loosen Locking Screw

Loosen the locking screw located on the bottom of the fixture.

#### Step 2: Remove the Fixture

Remove the fixture from the wall.

#### **Step 3: Unplug Power Connector**

Unplug the power connector located on the back of the fixture.

For CT Option unplug the power connector and heater receptacle

#### Step 4: Remove Screws

Remove the 6 screws from the rear of the fixture.

#### Step 5: Remove Face Cover

Carefully remove the face cover, handling the gasket with caution.

#### **Step 6: Release Battery**

Remove the 2 screws securing the battery holder.

#### Step 7: Disconnect Battery

Remove the battery plug and heater, if applicable.

For CT Option unplug the power connector and heater receptacle.

#### **Step 8: Replace Battery**

Replace the battery and heater, if applicable.

#### **Step 9: Secure Battery**

Reinstall the 2 screws to secure the battery holders.

#### Step 10: Reinstall Gasket and Cover

Using caution reinstall the gasket (if applicable) and face cover.

## Step 11: Secure Face Cover

Reinstall the 6 screws to secure the face cover.

#### Step 12: Re-connect Power

Re-connect the power connector.

## Step 13: Install the Fixture

Mount the unit back on the wall.

#### **Step 14: Tighten Locking Screw**

Tighten the locking screw located on the bottom of the fixture.



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